

CLAIM AMENDMENTS

WHAT IS CLAIMED IS:

This listing of the claims will replace all prior versions, and listing, of claims in the application:

1. (Currently Amended) A method for detaching a frozen charge—(5) from the inner wall of a grinding pipe—(1), comprising the steps of:

- controlling the drive device—(2) of the grinding pipe (1) ~~being controlled~~ for targeted detachment of the frozen charge—(5),

- varying angle of rotation—(ϕ) and speed of rotation of the grinding pipe—(1) ~~being varied~~ by the drive device—(2), characterized in that and

- setting the angle of rotation—(ϕ) ~~is set~~ to oscillate about at least one predetermined angle of rotation—(ϕ_1 , ϕ_2).

2. (Currently Amended) The method ~~as claimed in~~ according to claim 1, ~~characterized in that wherein~~ a maximum value of the angle of rotation—(ϕ) smaller than 180° is not exceeded.

3. (Currently Amended) The method according to claim 1, ~~wherein as claimed in claim 1, characterized in that~~ a maximum value of the angle of rotation—(ϕ) smaller than or equal to 90° is not exceeded.

4. (Currently Amended) The method according to claim 1, ~~wherein as claimed in one of claims 1 to 3, characterized in that~~ the maximum value of the angle of rotation—(ϕ) is dependent on the material nature of the frozen charge—(5).

5. (Currently Amended) The method according to claim 1,
wherein as claimed in one of claims 1 to 4, characterized in
~~that~~ the angle of rotation ~~(ϕ)~~ is set to oscillate about a
number of predetermined angles of rotation ~~(ϕ_1 or ϕ_2)~~ with the
same sign one after another.

6. (Currently Amended) The method according to claim 5,
wherein as claimed in claim 5, characterized in that the angle
of rotation ~~(ϕ)~~ is set to oscillate about a number of
predetermined angles of rotation ~~(ϕ_1, ϕ_2)~~ with different signs
one after another.

7. (Currently Amended) The method according to claim 1,
wherein as claimed in one of the preceding claims,
~~characterized in that~~ the grinding pipe ~~(1)~~ is braked abruptly
at least once at a predetermined angle of rotation ~~(ϕ)~~.

8. (Currently Amended) The method according to claim 7,
wherein as claimed in claim 7, characterized in that the
grinding pipe ~~(1)~~ is braked abruptly to a standstill.

9. (Currently Amended) The method according to claim 1,
wherein as claimed in one of the preceding claims,
~~characterized in that~~ the same motor is used for detaching the
frozen charge ~~(5)~~ as for rotating the grinding pipe ~~(1)~~ during
grinding operation.

10. (Currently Amended) The method according to claim 1,
wherein as claimed in one of the preceding claims,
~~characterized in that~~ the frozen charge ~~(5)~~ is wetted.

11. (Currently Amended) A control device—(3) for the drive device—(2) of a grinding pipe—(1) for comprising:
~~carrying out a method as claimed in one of the preceding claims~~

- a controller controlling the drive device of the grinding pipe for targeted detachment of a frozen charge, the controller comprising:

- means for varying an angle of rotation and speed of rotation of the grinding pipe, and

- means for setting the angle of rotation to oscillate about at least one predetermined angle of rotation.

12. (Currently Amended) The control device—(3) ~~as claimed in~~according to claim 11, ~~characterized in that comprising~~ it has means for defining an operating cycle for the grinding pipe (1).

13. (Currently Amended) The control device according to claim 11, comprising—(3) ~~as claimed in claim 11 or 12, characterized in that it has~~ a field-oriented regulating arrangement.

14. (Currently Amended) A drive device—(2) for a grinding pipe—(1) ~~with comprising~~ a control device—(3) as claimed in one of claims 11 to 13claim 11.

15. (Currently Amended) The drive device—(2) ~~as claimed in~~according to claim 14, ~~characterized in that comprising~~it has a motor which drives the grinding pipe—(1) both during grinding operation and for detaching the frozen charge—(5).

16. (Currently Amended) The drive device according to claim 15, wherein ~~(2) as claimed in claim 15, characterized in that~~ the motor is coupled to a converter.

17. (Currently Amended) The drive device according to claim 14, wherein ~~(2) as claimed in claim 15 or 16, characterized in that~~ the motor is a ring motor.

18. (Currently Amended) A tube mill ~~with~~ comprising a grinding pipe ~~(1) and with~~ a drive device ~~(2) as claimed in one of claims 14 to 17~~ according to claim 14.